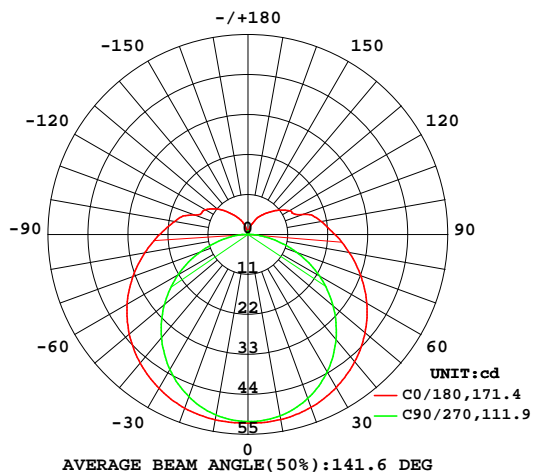


LUMINAIRE PHOTOMETRIC TEST REPORT

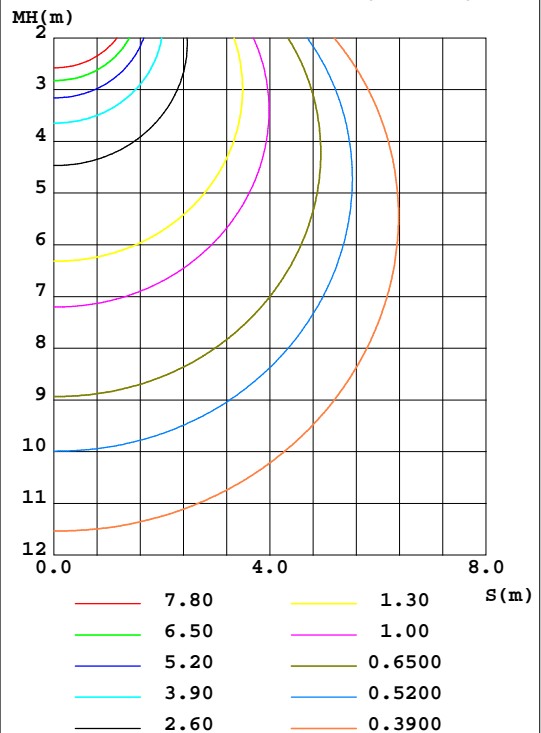
Test:U:24.00V I:0.5030A P:12.07W PF:1.000 Freq:0Hz Lamp Flux:236.178x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-0RGB24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 19.57 lm/W			
MODEL	NNS1224	I _{max} (cd)	51.89	S/MH(C0/180)	1.42
NOMINAL POWER(W)	12	LOR(%)	100.0	S/MH(C90/270)	1.24
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	236.18	h UP,DN(C0-180)	9.0,40.8
NOMINAL FLUX(lm)	236.178	CIE CLASS	SEMI-D.	h UP,DN(C180-360)	9.1,41.0
LAMPS INSIDE	1	h up(%)	18.2	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	24	h down(%)	81.8	CIBSE SHR MAX	1.50

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

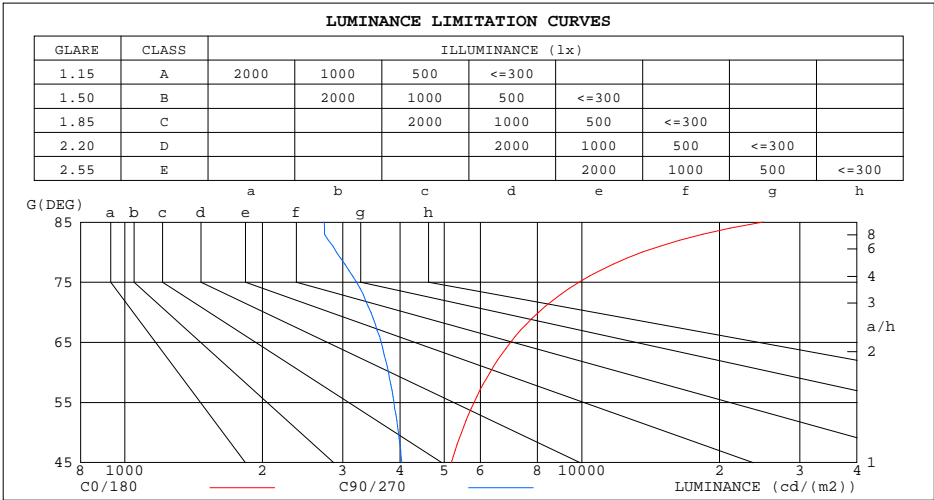
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	51.70	50.67	51.76	50.43					0~ 10	4.908	4.908	2.08,2.08
20	50.64	48.03	50.86	47.51					10~ 20	14.24	19.15	8.11,8.11
30	48.61	43.64	48.92	42.97					20~ 30	22.05	41.20	17.4,17.4
40	45.70	37.73	46.16	37.01					30~ 40	27.53	68.73	29.1,29.1
50	42.07	30.61	42.64	30.03					40~ 50	30.19	98.93	41.9,41.9
60	37.76	22.67	38.41	22.23					50~ 60	29.87	128.8	54.5,54.5
70	33.00	14.18	33.67	13.93					60~ 70	26.76	155.6	65.9,65.9
80	28.23	6.051	28.78	6.111					70~ 80	21.60	177.2	75,75
90	23.96	0.9575	24.32	1.522					80~ 90	16.07	193.2	81.8,81.8
100	20.56	0.1934	20.61	0.2318					90~100	12.49	205.7	87.1,87.1
110	16.31	0.2898	15.79	0.2189					100~110	10.07	215.8	91.4,91.4
120	13.19	0.4121	13.67	0.3345					110~120	7.215	223.0	94.4,94.4
130	10.38	0.5023	10.95	0.4243					120~130	5.607	228.6	96.8,96.8
140	7.621	0.5668	7.743	0.5018					130~140	3.755	232.4	98.4,98.4
150	5.424	0.6567	5.242	0.6089					140~150	2.227	234.6	99.3,99.3
160	3.023	0.7858	2.990	0.7273					150~160	1.127	235.7	99.8,99.8
170	0.8692	0.9270	0.9089	0.8810					160~170	0.3811	236.1	100,100
180	0.8112	0.9914	0.8240	0.9657					170~180	0.0842	236.2	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:24.00V I:0.5030A P:12.07W PF:1.000 Freq:0Hz Lamp Flux:236.178x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-0RGB24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



LUMINANCE cd/(m2)		
G(DEG)	C0/180	C90/270
85	24906	2731
80	13547	2904
75	9857	3215
70	8040	3456
65	6983	3640
60	6293	3778
55	5809	3880
50	5454	3968
45	5183	4040

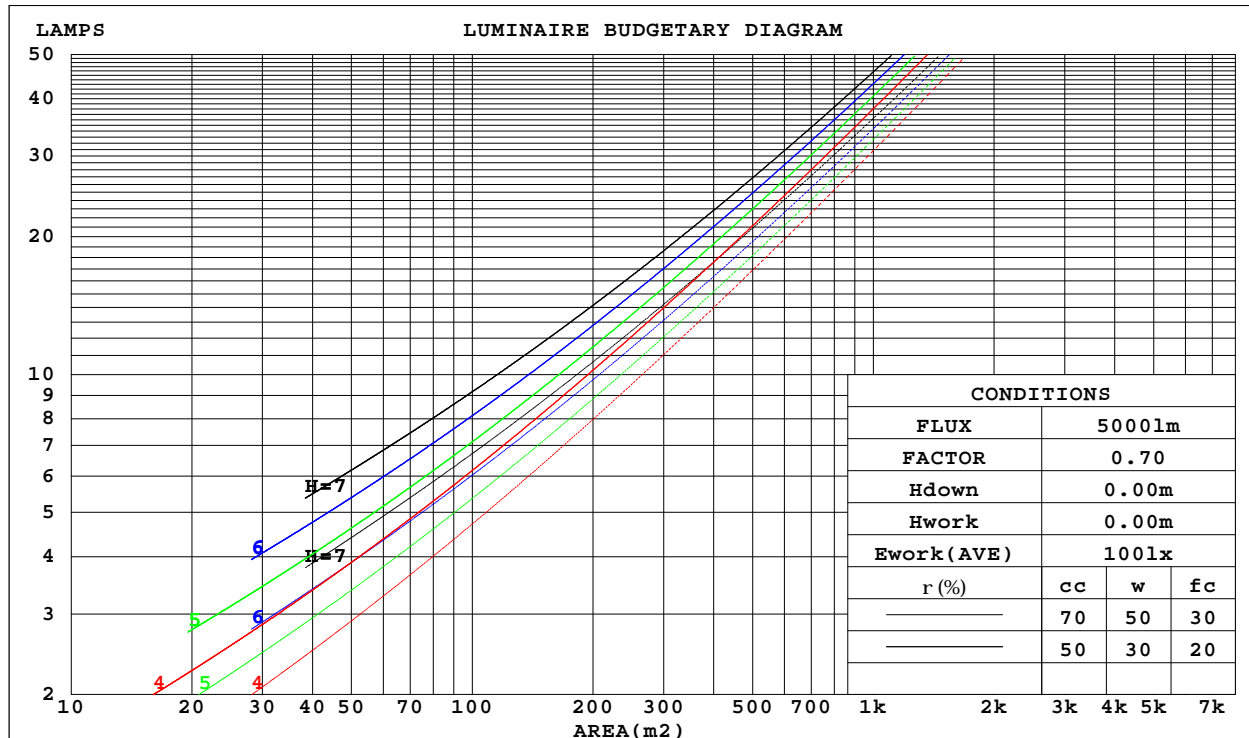
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:24.00V I:0.5030A P:12.07W PF:1.000 Freq:0Hz Lamp Flux:236.178x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-0RGB24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

r _{cc}	80%			70%			50%			30%			10%			0
r _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r _{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio			Coefficients of Utilization(CU)												
0.0	1.15	1.15	1.15	1.10	1.10	1.10	1.01	1.01	1.01	.93	.93	.93	.85	.85	.85	.82
1.0	.96	.91	.86	.92	.87	.83	.84	.80	.77	.77	.74	.71	.71	.68	.66	.63
2.0	.82	.74	.68	.79	.72	.66	.72	.66	.61	.66	.61	.57	.60	.57	.53	.50
3.0	.71	.62	.55	.68	.60	.54	.63	.56	.50	.57	.52	.47	.53	.48	.44	.41
4.0	.63	.53	.46	.60	.51	.45	.55	.48	.42	.51	.45	.40	.46	.41	.37	.34
5.0	.56	.46	.39	.53	.45	.38	.49	.42	.36	.45	.39	.34	.42	.36	.32	.29
6.0	.50	.40	.34	.48	.39	.33	.44	.37	.31	.41	.34	.29	.38	.32	.28	.25
7.0	.45	.36	.30	.43	.35	.29	.40	.33	.27	.37	.31	.26	.34	.29	.25	.22
8.0	.41	.32	.26	.39	.31	.25	.36	.29	.24	.34	.28	.23	.31	.26	.22	.20
9.0	.37	.29	.23	.36	.28	.23	.33	.27	.22	.31	.25	.21	.29	.24	.20	.18
10.0	.34	.26	.21	.33	.26	.20	.31	.24	.20	.29	.23	.19	.27	.21	.18	.16



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:COLORS
 Test Date:2019-07-01

g Range: 0 - 180DEG
 g Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:10.750m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:24.00V I:0.5030A P:12.07W PF:1.000 Freq:0Hz Lamp Flux:236.178x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-0RGB24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio			Wall Exitance Coefficients(WEC)												
0.0																
1.0	.377	.214	.068	.364	.208	.066	.340	.195	.062	.318	.183	.059	.298	.173	.056	
2.0	.329	.180	.055	.317	.175	.054	.295	.164	.051	.276	.155	.048	.257	.145	.046	
3.0	.293	.156	.047	.283	.151	.046	.263	.143	.043	.245	.134	.041	.228	.126	.039	
4.0	.264	.137	.040	.255	.133	.039	.237	.126	.038	.221	.119	.036	.206	.112	.034	
5.0	.241	.123	.036	.232	.119	.035	.216	.113	.033	.201	.106	.032	.187	.100	.030	
6.0	.221	.111	.032	.213	.108	.031	.198	.102	.030	.185	.096	.028	.172	.090	.027	
7.0	.204	.101	.029	.197	.098	.028	.183	.093	.027	.171	.088	.025	.159	.083	.024	
8.0	.189	.092	.026	.183	.090	.025	.170	.085	.024	.159	.080	.023	.148	.076	.022	
9.0	.176	.085	.024	.170	.083	.023	.159	.079	.022	.148	.074	.021	.138	.070	.020	
10.0	.165	.079	.022	.160	.077	.022	.149	.073	.021	.139	.069	.020	.130	.065	.019	

rcc	80%			70%			50%			30%			10%			0
rw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
rfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio			Ceiling Cavity Exitance Coefficients(CCEC)												
0.0	.329	.329	.329	.281	.281	.281	.192	.192	.192	.110	.110	.110	.035	.035	.035	
1.0	.325	.295	.269	.278	.253	.231	.190	.174	.160	.109	.101	.093	.035	.032	.030	
2.0	.318	.272	.234	.272	.234	.202	.187	.162	.141	.108	.094	.083	.035	.031	.027	
3.0	.310	.256	.212	.266	.221	.184	.183	.153	.129	.105	.090	.076	.034	.029	.025	
4.0	.303	.243	.198	.260	.210	.172	.179	.147	.121	.103	.086	.072	.033	.028	.024	
5.0	.295	.234	.188	.253	.202	.164	.175	.141	.116	.101	.083	.069	.033	.027	.023	
6.0	.288	.226	.181	.247	.195	.158	.171	.137	.112	.099	.080	.066	.032	.026	.022	
7.0	.281	.219	.176	.241	.190	.153	.167	.133	.109	.097	.078	.065	.031	.026	.021	
8.0	.274	.213	.172	.236	.185	.150	.163	.130	.106	.095	.077	.063	.031	.025	.021	
9.0	.268	.209	.169	.231	.181	.147	.160	.127	.105	.093	.075	.062	.030	.025	.021	
10.0	.262	.204	.166	.226	.178	.145	.157	.125	.103	.091	.074	.062	.030	.024	.020	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:24.00V I:0.5030A P:12.07W PF:1.000 Freq:0Hz Lamp Flux:236.178x1 lm											
NAME: NNS1224					TYPE:			WEIGHT:			
SPEC.:NNS1224-0RGB24CSS050CC0100					DIM.: 1000*12*24mm			SERIAL No.:			
MFR.: Colors					SUR.:1000*12			Shielding Angle:			
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3	
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3	
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Room dimensions	Viewed crosswise					Viewed endwise					
x = 2H y = 2H	23.2	24.5	23.7	25.0	25.6	21.3	22.7	21.9	23.2	23.8	
	3H	25.8	27.0	26.3	27.6	28.2	22.9	24.2	23.5	24.7	25.3
	4H	27.3	28.5	27.8	29.0	29.6	23.5	24.7	24.1	25.3	25.9
	6H	28.9	30.0	29.5	30.6	31.3	24.0	25.1	24.6	25.7	26.4
	8H	29.8	30.9	30.4	31.5	32.2	24.2	25.2	24.8	25.8	26.5
	12H	30.9	31.9	31.5	32.5	33.2	24.3	25.3	24.9	25.9	26.6
4H	2H	23.7	24.9	24.2	25.4	26.1	22.4	23.6	22.9	24.1	24.7
	3H	26.5	27.6	27.1	28.2	28.8	24.2	25.2	24.8	25.8	26.5
	4H	28.1	29.1	28.8	29.7	30.4	25.0	26.0	25.6	26.6	27.3
	6H	30.0	30.8	30.6	31.5	32.2	25.7	26.5	26.3	27.2	27.9
	8H	31.0	31.8	31.7	32.5	33.3	25.9	26.7	26.6	27.4	28.1
	12H	32.3	33.0	32.9	33.7	34.5	26.1	26.8	26.8	27.5	28.3
8H	4H	28.4	29.2	29.1	29.9	30.6	25.9	26.7	26.5	27.3	28.1
	6H	30.5	31.2	31.2	31.9	32.7	26.9	27.5	27.6	28.2	29.0
	8H	31.8	32.4	32.5	33.1	33.9	27.3	27.9	28.0	28.6	29.4
	12H	33.2	33.8	34.0	34.5	35.3	27.7	28.2	28.4	28.9	29.8
12H	4H	28.4	29.2	29.1	29.8	30.6	26.1	26.9	26.8	27.5	28.3
	6H	30.6	31.2	31.3	31.9	32.7	27.3	27.9	28.0	28.6	29.4
	8H	31.9	32.5	32.7	33.2	34.0	27.9	28.4	28.6	29.2	30.0
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2					
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.5					

CIE Pub.117, 236.2 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -5.0)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:24.00V I:0.5030A P:12.07W PF:1.000 Freq:0Hz Lamp Flux:236.178x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-0RGB24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

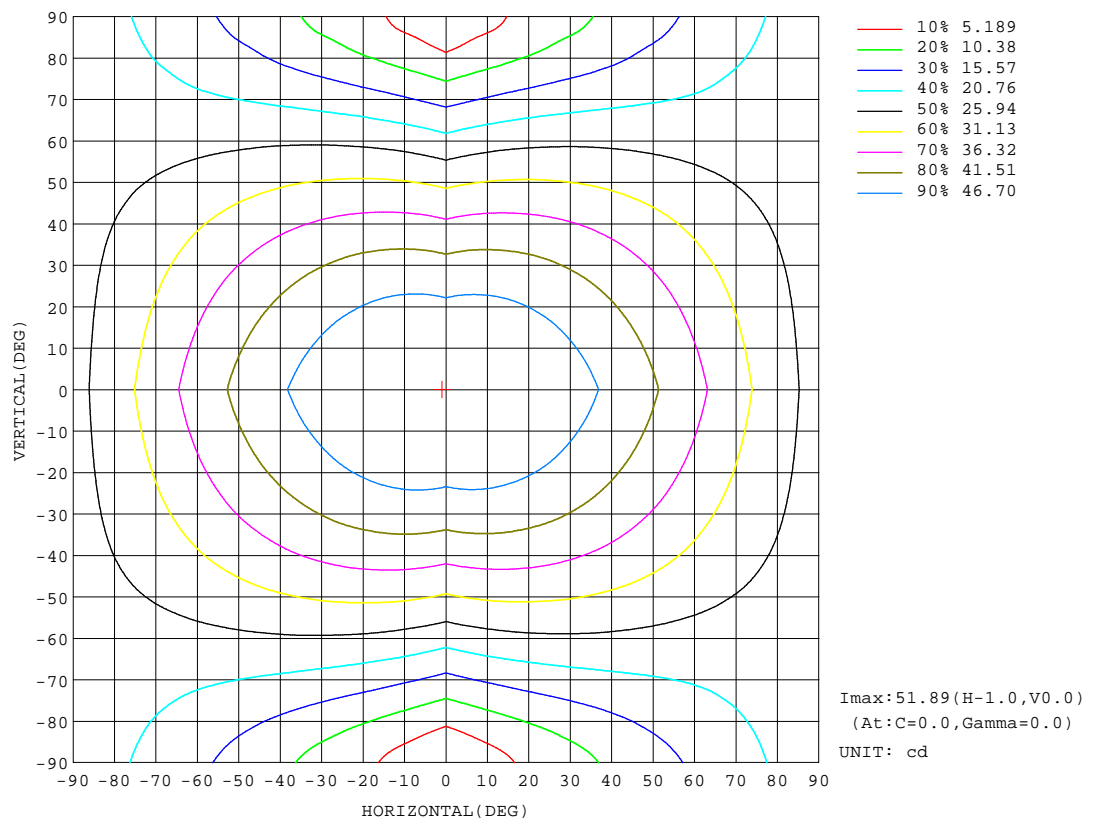
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	48	36	28	47	35	28	45	34	28	21
0.80	57	44	36	56	44	36	53	42	35	27
1.00	65	52	44	63	51	43	59	52	42	33
1.25	72	59	51	70	58	50	65	56	48	39
1.50	77	65	57	74	63	55	69	60	53	43
2.00	84	73	65	81	71	64	76	67	61	49
2.50	89	79	71	85	76	69	79	72	66	53
3.00	93	83	76	89	81	74	82	76	70	57
4.00	97	89	83	93	86	81	86	81	76	61
5.00	100	93	88	96	90	85	89	84	79	64
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

ISOCANDELA DIAGRAM

Test:U:24.00V I:0.5030A P:12.07W PF:1.000 Freq:0Hz Lamp Flux:236.178x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-0RGB24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



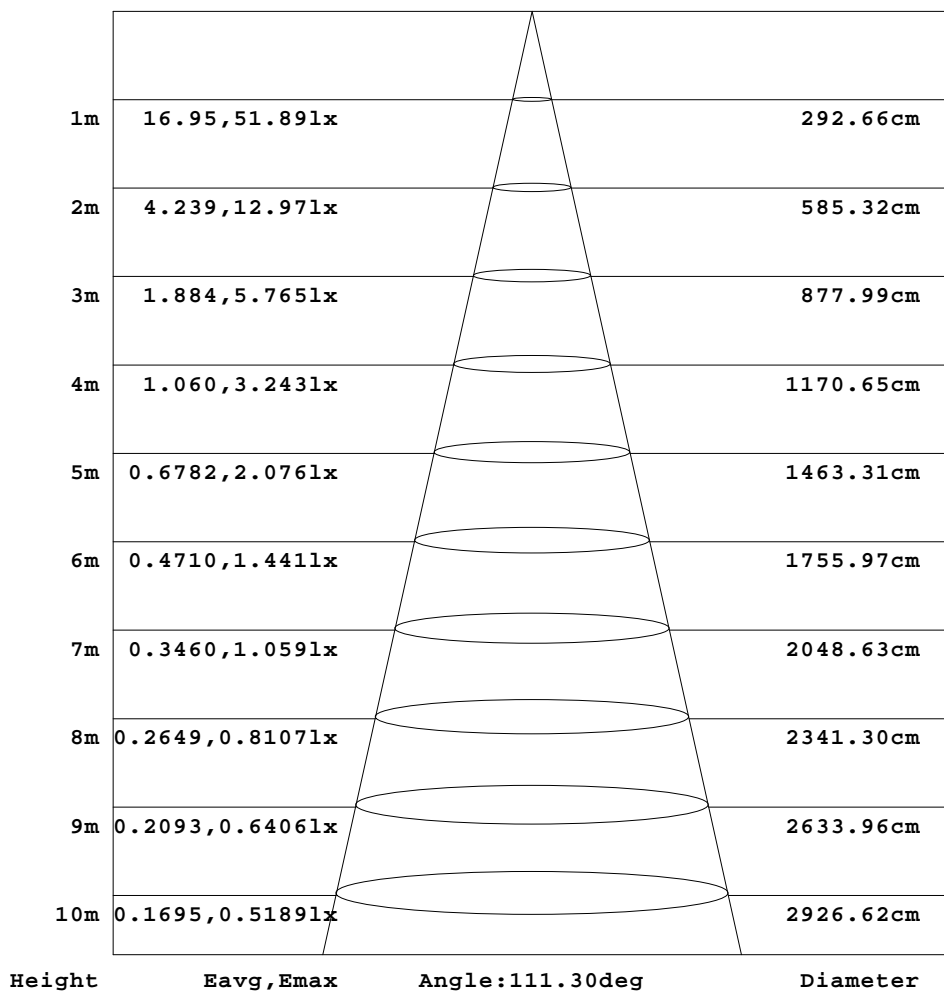
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: COLORS
Test Date: 2019-07-01

deg Range: 0 - 180DEG
Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 10.750m [K=1.0000]
Remarks:

AAI Figure

Test:U:24.00V I:0.5030A P:12.07W PF:1.000 Freq:0Hz Lamp Flux:236.178x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-0RGB24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

Flux out:117.1 lm



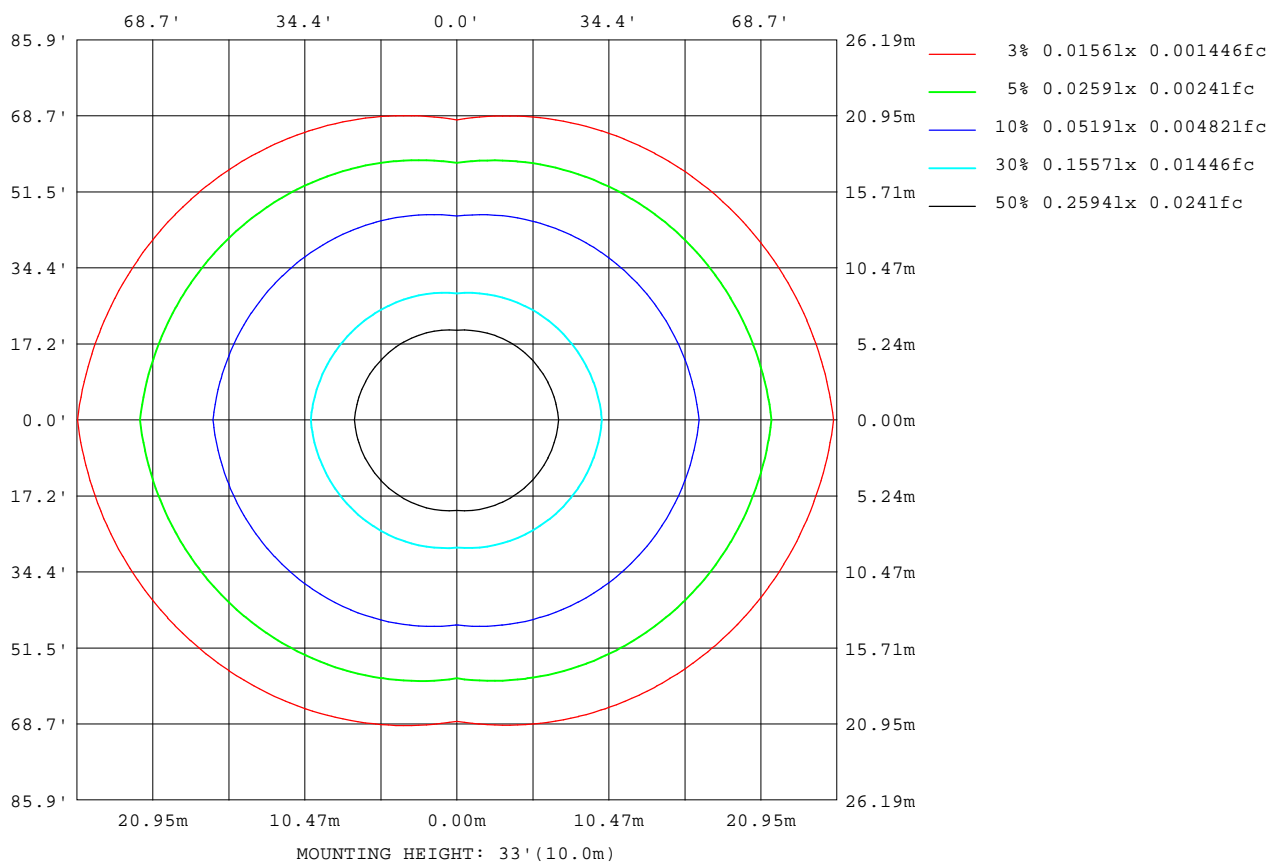
Note:The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:24.00V I:0.5030A P:12.07W PF:1.000 Freq:0Hz Lamp Flux:236.178x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-0RGB24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:24.00V I:0.5030A P:12.07W PF:1.000 Freq:0Hz Lamp Flux:236.178x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-0RGB24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

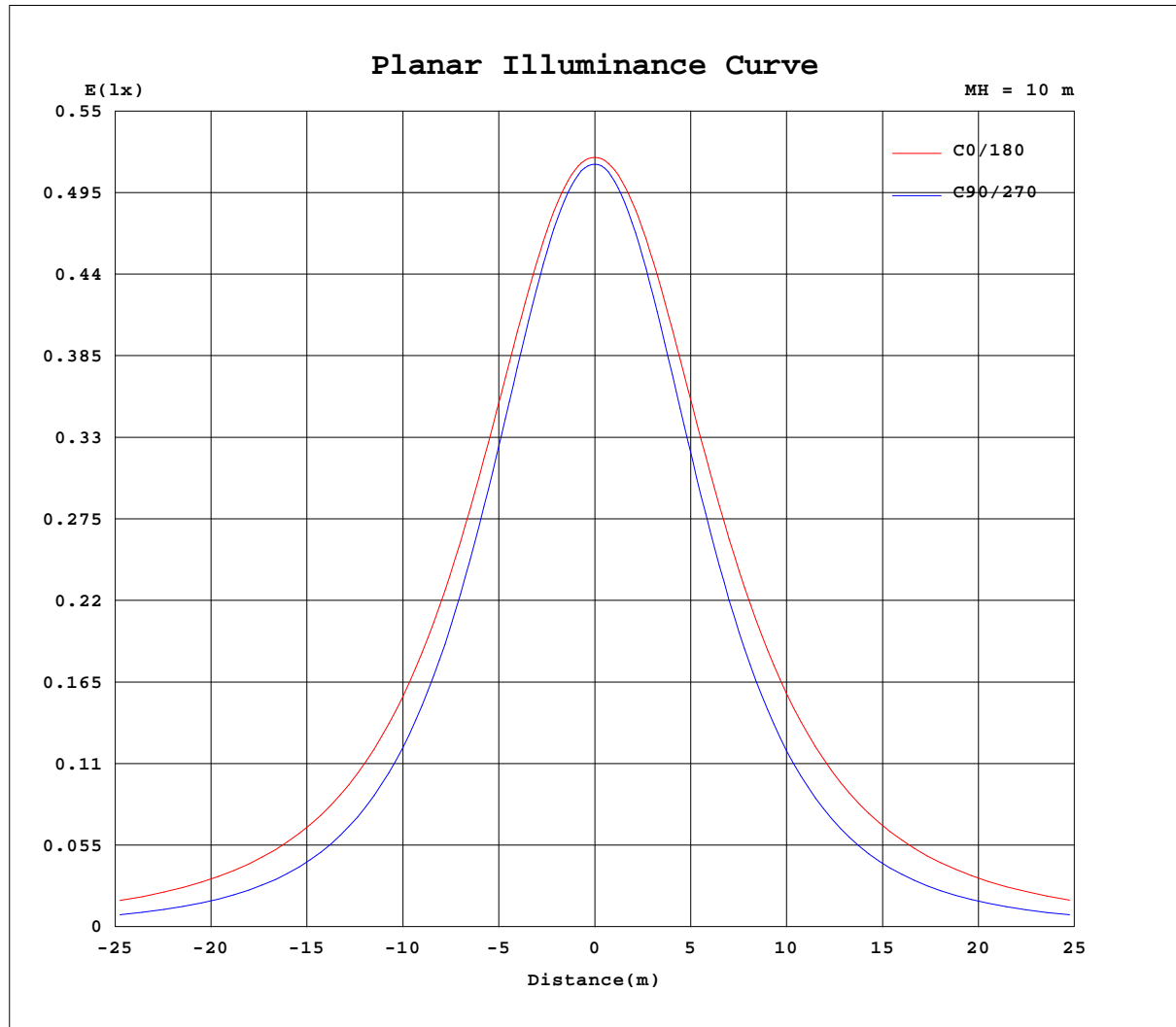
AvgL	cd/m2
L_0~180(65)av	7050
L_0~180(75)av	9953
L_0~180(85)av	25095
L_90~270(65)av	3605
L_90~270(75)av	3196
L_90~270(85)av	2945
L_45(65)av	4901
L_45(75)av	5736
L_45(85)av	11263

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: COLORS
Test Date: 2019-07-01

Range: 0 - 180DEG
Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 10.750m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.00V I:0.5030A P:12.07W PF:1.000 Freq:0Hz Lamp Flux:236.178x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-0RGB24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	90	180	270															
0	51.9	51.4	51.9	51.4															
5	51.9	51.3	51.9	51.2															
10	51.7	50.7	51.8	50.4															
15	51.3	49.6	51.4	49.2															
20	50.6	48.0	50.9	47.5															
25	49.7	46.0	50.0	45.4															
30	48.6	43.6	48.9	43.0															
35	47.2	40.8	47.6	40.1															
40	45.7	37.7	46.2	37.0															
45	44.0	34.3	44.5	33.6															
50	42.1	30.6	42.6	30.0															
55	40.0	26.7	40.6	26.2															
60	37.8	22.7	38.4	22.2															
65	35.4	18.5	36.1	18.1															
70	33.0	14.2	33.7	13.9															
75	30.6	9.98	31.2	9.87															
80	28.2	6.05	28.8	6.11															
85	26.0	2.86	26.4	3.30															
90	24.0	0.96	24.3	1.52															
95	22.1	0.30	22.4	0.43															
100	20.6	0.19	20.6	0.23															
105	19.0	0.23	19.0	0.22															
110	16.3	0.29	15.8	0.22															
115	13.8	0.35	14.1	0.28															
120	13.2	0.41	13.7	0.33															
125	11.7	0.46	12.4	0.38															
130	10.4	0.50	10.9	0.42															
135	8.96	0.54	9.35	0.48															
140	7.62	0.57	7.74	0.50															
145	6.47	0.61	6.38	0.56															
150	5.42	0.66	5.24	0.61															
155	4.01	0.71	4.17	0.66															
160	3.02	0.79	2.99	0.73															
165	2.13	0.86	1.48	0.80															
170	0.87	0.93	0.91	0.88															
175	0.82	0.98	0.75	0.93															
180	0.81	0.99	0.82	0.97															

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks: